

A Work Project, presented as part of the requirements for the Award of a Master's Degree in Management from the NOVA – School of Business and Economics.

DIVERSITY ON BOARDS OF DIRECTORS:  
EVIDENCE FROM PORTUGUESE AND SPANISH NON-FINANCIAL COMPANIES

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## **Abstract**

The main purpose of this work project is to investigate whether attributes of board of directors such as gender, board's size, type auditor hired, proportion of foreign directors and outside directors influence company performance. A hierarchical ordinary least square regression is performed using data from 83 non-financial companies listed on the Portuguese and Spanish stock exchange. The conclusions indicate that board size and proportion of foreign directors are positively related to company turnover. Concerning the control variables used, company size is positively related to company performance. To sum up, the empirical results suggest that board attributes positively influence company performance.

**Keywords:** corporate governance; diversity on boards; company turnover; Iberia

# **1. INTRODUCTION**

There have been many discussions among researchers, scholars and governmental agencies on the area of corporate governance, especially after the financial crisis of the last decades, most of these scandals in the corporate world. Worth to mention are Siemens, Enron, Parmalat, Tyco, Volkswagen, as well as a large number of banks, who were charged with bribery, fraud, corruption or other ways of financial greed. The results of these scandals made governments to take measures and intervene on their corporate governance systems. The first to apply these changes were the US with the Sarbanes-Oxley act and the UK with the Cadbury Committee (1992) recommendations and most recent (OECD 2004), (G20/OECD 2015) and the Bank of International Settlements (2015).

Corporate governance is the framework by which firms conduct their business and are controlled. More precisely, assures companies' stakeholders to get their return on investment (Shleifer and Vishny 1997). This framework consists of a separation of ownership from management. Directors are elected by the stockholders of the company, and they have the power to appoint and supervise the management. Conflicts between the management and shareholders may arise due to contradictory personal financial interests, which can negatively affect company's performance. (Fama and Jensen 1983), refer to this as agency costs, which is the reduction of company's performance due to internal conflicts between the principal and the agent. Other papers in the field of corporate governance study the relation between the financial performance and various characteristics of board governance. Most of this research has been conducted on board elements, such as independence, composition, frequency of board meetings, board size, gender and ethnic diversity, and mostly focused on US companies (Fama and Jensen,

1983; Shleifer and Vishny, 1997; Hillman and Dalziel, 2003; Nicholson and C., 2007; Carter et al., 2010).

For instance, Carter et al. (2010) argue that there is no significant relationship between the financial performance of major US companies, and ethnic and gender diversity on their boards. Erhardt, Werbel, and Shrader (2003) measured diversity through the percentages of minorities (e.g. women) on board of 127 US firms and concluded that board diversity is positively correlated with the indicators of company's performance. On the other hand empirical evidence from India demonstrates that a large number of independent directors negatively effects firms' performance, differently from board size that is positively correlated with performance (Chugh, Meador and Kumar 2011).

This dissertation researches the relationship between the characteristics of boards of directors and performance in Portuguese and Spanish listed non-financial firms. The main objective is to identify how board diversity influences company performance and more specifically which board diversity elements affect firm performance the most. The following sections are organized as follows: Section two presents a literature review on prior research done on the corporate governance area; Section three provides the data and sample selection process; Section four present the empirical analysis conducted and a step by step explanation of the tests applied; Section five presents the empirical results; Section six presents the conclusions and the final remarks.

## **2. LITERATURE REVIEW**

### **2.1 Corporate Governance**

Corporate governance is the framework by which firms are controlled and managed. This framework determines the relationship between board of directors, stakeholders and management of a corporation, which strongly affects company's operations. Fundamentally, it deals with the separation of control from ownership and it's a tool for preventing principal-agent conflicts (Shleifer and Vishny 1997).

Corporate governance also supplies the instruments through which a firm sets its objectives, and the mechanisms of maintaining those objectives and supervising its performance (OECD 2004).

Good corporate governance establishes a fair and transparent business environment and ensures the veracity of corporates' actions. On the other hand, fragile governance can lead to mismanagement, waste of resources and corruption (Youssef 2011).

Conformity to corporate governance framework benefits to many parties in the business environment, but the main focus remains to the shareholders, companies and the national economy. At first, it provides shareholders with information regarding financial and managerial issues, so they can have a greater insurance on their investment. From a company's perspective, good corporate governance makes financial and capital markets easily accessible (Youssef 2011). Often, during financial crisis, firms are obliged to go through tough corporate governance reforms in order to seek funds. Also, it helps them sustain in a steadily competitive environment through partnerships, M&A and diversification. Generally, a better corporate governance demands better internal control systems, hence leading to higher profit margins and greater accountability. As last, a

country that does not enforce robust corporate governance frameworks will not obtain any capital in-flows, for the fact that investors may doubt reporting standards and the level of disclosure. (Youssef 2011)

## **2.2 Board characteristics and performance**

Usually boards of directors have two type of functions in a company: a monitoring and controlling function and a consultative role towards management (M. C. Jensen 1993). There are theories that support each of the BoD's functions. Daily, Dalton and Cannella, (2003) prove that the importance of the controlling role is accentuated by the agency theory, whereas the importance of the consultative role is emphasized by the resource dependence theory (Zahra and Pearce, 1989),(Johnson, Ellstrand and Daily, 1996), (Daily, Dalton and Cannella, 2003). Both these theories suggest that some board characteristics can have an impact on the monitoring and advising role of the board (Bianco, Ciavarella and Signoretti 2013), hence affecting firm performance. Agency theory stresses the fact that the segregation of the management from ownership leads to managers' self-centered behavior and information asymmetry, meaning more agency costs and conflicts for the company. Research has found that in order to reduce the agency costs and assure an effective control and monitoring, boards of directors are chosen as an internal ruling body (Park and Shin 2004). Consequently, it is board's responsibility to apply effective corporate governance practices, being that they are liable for the well-functioning of the company and its financial performance. Board's actions in applying efficacious practices may depend on board's characteristics. For example, a highly dependent board can negatively affect performance since independent directors are less informed than inside directors and they are not full-time employed by the company (Bozec 2005). The diversity of board of directors is defined from a number of board's

characteristics, in this study the following are analyzed: gender, board size, auditing company, proportion of non-nationals, and interlocking directors. In order to test the relationship between boards' diversity and company performance the following hypothesis are formulated:

**Gender diversity:** Previous studies consider gender and ethnic diversity to have the same impact on company performance, so they merge these two characteristics in the same variable. However, this research follows the suggestion of Carter et al (2010), whom find significant differences between ethnic minority directors and women directors based on human capital theory. In this paper, gender diversity represents the gender difference on boards of directors, hence the proportion of women out of the total number of directors. Gender studies around the world link women with qualities such as tender, empathy, affection and interest in promoting important values in a community (Eagly, Karau and Makhijani, 1995; Boulouta, 2013), hence women could indirectly improve firm performance. Consistent with this logic, several studies pose that female participation in boards boosts companies' returns (Erhardt et al., 2003; Francoeur, Labelle and Sinclair-Desgagné, 2008; Adams and Ferreira, 2009). Contrarily, others have found a negative impact of gender diversity in performance (Shrader and Blackburn 1997), and still others report no impact at all or inconclusive results (Daily et al., 1999; Carter et al., 2003; Adams, Gupta and Leeth, 2009). Considering the above-mentioned studies, it is deduced that company performance improves when wider female presence on boards.

**Hypothesis 1:** *Ceteris paribus*, wider presence of female directors on boards will improve company performance.

**Board Size:** Board size in this paper represents the number of directors sitting on a company's board. According to Limpton and Jay (1992) by limiting board's size to seven or eight members, there will be better coordination, communication and compliance in decision-making, hence increasing board's performance. On the same line Jensen (1993) states that smaller boards can boost company performance, as there is a wider participation from all members in the monitoring and evaluation process of the management's activities. However, alternative studies based on the resource dependence theory argue that larger boards have greater collective information in their possession, leading to a higher performance (Zahra and Pearce, 1989; Guest, 2009,). Another advantage of large boards is that their members can support the management with better counseling, as there are higher chances that the members come from different industry sectors and backgrounds and can offer a high quality expertise (Dalton et al. 1999; Lopes and Ferraz, 2016). Based on these arguments, it is inferred that larger boards of directors improve company performance.

**Hypothesis 2:** *Ceteris paribus*, larger boards will enhance company performance.

**Auditor:** Auditing provides a control and bonding mechanism so to minimize the agency costs provoked by asymmetric information between parties (Watts and Zimmerman, 1983; Jensen and Meckling, 1976). In this study, the hired auditing company has been considered as one of the board's characteristics, more specifically it is defined if the board has contracted a Big 4 auditing firm or not. Based on the Taiwanese market, Lee and Lee, (2013) proved that the equity book value and the earnings audited by Big 4 auditors justify more the variations in stock returns than those audited by other auditors. Their results are in favor of the efficiency of audits offered by Big 4 audit firms, as the financial reports audited by them give a more accurate and relevant information for company value,



therefore is more appropriate for projecting future value of the firm. Based on these arguments, it is inferred that the type of audit firm contracted influences company performance.

**Hypothesis 3:** *Ceteris paribus*, company performance is influenced by the type of audit firm hired.

**Board composition:** In this paper, board composition refers to the diversity of nationalities in the board of directors, hence the number of ‘non-nationals’ sitting on a companies’ boards. Other researchers have analyzed the impact of foreign directors on company performance. Oxelheim and Randoy (2003) in accordance with the resource dependence theory confirm that the participation of foreign directors in boards improves company performance due to their experience in foreign markets and also cultural knowledge. Particularly, they increase board’s network of contacts and its international exposure. Contrarily, evidence from Switzerland shows that a high number of diverse nationalities in boards can complicate the integration and communication within board members. This leading to conflicts which can affect the decision making process of the board and its performance (Ruigrok, Peck and Tacheva 2007). In general, empirical studies show a positive relationship among company performance and ‘non-national’ directors. Evidence from the Korean market also confirms that international diversity among board members positively effects performance (Choi, Park and Yoo 2007). Following these arguments, it is deduced that foreign directors’ participation will increase company performance.

**Hypothesis 4:** *Ceteris paribus*, the presence of foreign directors on boards will improve firm performance.

**Interlocking directorate:** Interlocking directorate is a common phenomenon that arises when one or more board members sit on another's company board of directors (Mizruchi 1996). Here it's measured as the ratio of board's members who sit on external companies' boards. It has been reported that publicly traded companies disclosed relevant enhancement in operating performance when they had appointed at least three outside directors on their board of directors (Dahya and McConnell 2005). Brickley and James (1987) noted that a relevant number of external directors has the tendency to better control and lower management's benefits and perks. Alternatively, a study focused on US companies shows that there is a negative relation between firm performance and outside directors (Agrawal and Knoeber 1996). In addition, it was observed that a high number of outside directors on a board negatively influences company performance, on terms of price-earnings ratio and return on assets (Ehikioya 2009) and market value added (Coles et al. 2001). Nevertheless, many other studies report inconclusive results on the link between company performance and the ration of outside directors (Mehran, 1995; Hermalin and Weisbach, 2003; Bhagat and Black, 2008). Evidence from the South Korean market also finds no correlation between the above mention variables (Black, Jang and Kim 2006). Considering that the expertise and experience of outside directors could be an asset for the company, it is inferred that interlocking directorate improves firm performance.

**Hypothesis 5:** Ceteris paribus, the presence of a considerable number of outside directors will improve firm performance.

### **3. Data and sample selection**

The data on which this paper is based is extracted from publicly listed companies on the Portuguese (PSI 20) and Spanish Stock Market (IBEX 35). Companies operating in the financial industry were excluded from the dataset being that they undergo different governance regulations compared to other companies (Klein 1998). Data relevant to the attributes of the independent variables were taken from the 2013 annual corporate governance report of the selected companies, while the data related to the companies' performance measures were extracted from DataStream for the 2014 financial year. After excluding 44 financial companies and eliminating companies with missing information, a sample of 97 companies was available for this empirical study.

Before conducting the empirical analysis it is necessary to make sure that the available sample is eligible for applying a multiple regression. The data has been checked for some required assumptions with the help of SPSS Statistics, so the performed regression could give valid results. Durbin-Watson statistic assures the independence of observations and takes a value of 2.134, showing that there is no correlation in the chosen sample. Additionally, it has been verified that the residuals are normally distributed and they fit the normal distribution line. There should be a linear relationship between the independent variables and the dependent variable and it can easily verified by visually inspecting the scatterplot. The data has also been tested for homoscedasticity so to assure that the variances remain similar when moving along the residuals line. Furthermore, it should be checked that the independent variables are not highly correlated with each other, which can be verified by observing the Variance Inflation Factor (VIF) values. Being that the independent variables have a VIF value between 1.069 and 2.670 (not close to 10), it can be said that there is no multicollinearity. As last, three other tools are used

in order to eliminate significant outliers, high leverage and influential points, which otherwise can reduce the significance and the predictive accuracy of the model. The respective measures were set as follows: Mahalanobis Distance  $< 16.919$ ; Centered Leverage Value  $< 0.295$ ; Cook's Distance  $< 1$ . After eliminating all the outliers and running all the necessary tests, a final sample of 83 companies (Portugal 33; Spain 50) was available for the empirical model.

<b>Table 1. Description of variables</b>		
<b>Variable type</b>	<b>Variable</b>	<b>Description</b>
<b>DEPENDENT</b>	TUR <sub>it</sub>	Logarithm of company's turnover (Net sales)
	ROE <sub>it</sub>	Net income to shareholders equity ratio
	ROS <sub>it</sub>	EBIT to total sales and services ratio
	ROA <sub>it</sub>	Net income to total assets ratio
	NET-INC <sub>it</sub>	Net income after preferred dividends
<b>INDEPENDENT</b>	BDWOM <sub>it</sub>	Proportion of women in company's board of directors
	BDNON-NAT <sub>it</sub>	Proportion of foreigners (non-nationals) in company's board of directors
	AUD <sub>it</sub>	Auditing company hired (1 if Big4, 0 otherwise)
	BDEXEC <sub>it</sub>	Proportion of executive members in company's board of directors
	BDAGE <sub>it</sub>	Board's members average age
	BDIND <sub>it</sub>	Proportion of independent in the board
	BDEXT <sub>it</sub>	Proportion of members sitting on external companies' boards
	BDSIZE <sub>it</sub>	Number of member sitting on the board of directors
	COUNT <sub>it</sub>	Company listed on the Portuguese or Spanish Stock Exchange (1 if Portuguese, 0 if Spanish)
<b>CONTROL</b>	SIZE <sub>it</sub>	Logarithm of total assets
	LEV <sub>it</sub>	Total book debts to total assets ratio

#### 4. Empirical Model

The work project attempts to analyze the effect of board of director's diversity on company performance. Some accounting based measures like ROE, ROA, ROS, Company Turnover and Net Income, were used to evaluate the performance of the selected firms. Firstly, these measures were examined via correlation analysis with a number of board characteristics as described in Table 1 above, in order to test the relationship between the variables. Secondly, a hierarchical regression analysis was implemented to determine the effect of the boards' characteristics variables on the performance measures. In the first step of the regression analysis, Size (logarithm of total assets) and Leverage (total debts to total assets) of the selected companies were entered as control variables. Then, the rest of the independent variables were added to the regression. The resulting levels of significance were determined by the change in the explained variance. This approach to the analysis is considered as a befitting way to analyze variations in the dependent variables (Cohen, et al. 2003).

The empirical model built identifies which of the variables best explains the variance of the dependent variable and it is expressed with the following equation:

$$(1): Y_{it} = \beta_0 + \beta_1 BDSIZE_{it} + \beta_2 BDWOM_{it} + \beta_3 BDIND_{it} + \beta_4 BDNON-NAT_{it} + \beta_5 BDAGE_{it} + \beta_6 BDEXT_{it} + \beta_7 BDEXEC_{it} + \beta_8 AUD_{it} + \beta_9 COUNT_{it} + \varepsilon_{it}$$

$$(i = 1, \dots, n ; t = 1, \dots, m)$$

## 5. Results and Interpretation

### 5.1 Descriptive and correlation measures

Firms used for the purpose of this study operate in nine different activity sectors. Companies in the ‘Industrials’ sector represent 25.3% of the total sample, including transportation, electronic, aerospace and defense, construction and materials, electronics, and electrical equipment. The second most representative sector of the sample is ‘Consumer Goods’ with 19.8%, which includes food and beverage producers, leisure goods, tobacco, home construction, and automobiles. Regarding the ‘AUD’ variable, 84.4% of the companies hired a Big4 audit firm and only 13 (15.6%) were audited by a non-Big4 audit firm. The descriptive statistics are revealed in Table 2 below.

**Table 2: Descriptive Statistics**

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Skewness</i>		<i>Kurtosis</i>	
	<i>Stat.</i>	<i>Stat.</i>	<i>Stat.</i>	<i>Stat.</i>	<i>Stat.</i>	<i>Stat.</i>	<i>S.E</i>	<i>Stat.</i>	<i>Stat.</i>
<b>TUR</b>	83	9.863	17.670	13.783	1.813	-0.029	0.264	-0.339	0.523
<b>LEV</b>	83	0.004	1.076	0.370	0.190	0.572	0.264	1.660	0.523
<b>SIZE</b>	83	10.055	18.024	14.294	1.914	-0.074	0.264	-0.628	0.523
<b>BDSIZE</b>	83	5	23	11.337	3.660	0.666	0.264	0.262	0.523
<b>BDWOM</b>	83	0.000	0.364	0.113	0.104	0.686	0.264	-0.361	0.523
<b>BDIND</b>	83	0.000	0.889	0.354	0.190	0.208	0.264	-0.163	0.523
<b>BDNON_NA T</b>	83	0.000	1.000	0.164	0.217	1.542	0.264	2.235	0.523
<b>BDAGE</b>	83	47.313	66.286	58.203	3.861	-0.126	0.264	0.221	0.523
<b>BDEXT</b>	83	0.222	1.000	0.705	0.162	-0.013	0.264	-0.058	0.523
<b>BDEXEC</b>	83	0.000	0.875	0.274	0.166	1.104	0.264	1.764	0.523
<b>AUD</b>	83	0	1	.892	.313	-2.565	.264	4.693	.523
<b>COUNT</b>	83	0	1	.398	.492	.426	.264	-1.864	.523

Pearson's correlation matrix in Table. 3 shows the statistically significant relationships of the dependent variable, TUR, with the independent variables which represent the boards' characteristics. TUR is correlated with BDSIZE ( $R=0.656$ ;  $p=0.000$ ), BDIND ( $R=0.247$ ;  $p=0.012$ ), BDNON\_NAT ( $R=-.172$ ;  $p=0.060$ ), BDAGE ( $R=0.253$ ;  $p=0.011$ ), BDEXT ( $R=-0.167$ ;  $p=0.066$ ) BDEXEC ( $R=-0.311$ ;  $p=0.002$ ) and AUD ( $R=0.306$ ;  $p=0.002$ ). Hence, these coefficients support the results achieved by Dalton, et al. (1999) and Guest (2009), that larger boards lead to higher company performance. However they contradict the outcome of Jensen (1993) and Yermack (1996) who suggest that coordination and director free-riding make larger boards less effective. Confirming the results of Lee and Lee (2013), the performance of companies is influenced by the type of auditor. Firms that hire a Big4 auditor perform better than those audited by non-Big4 companies.

Moreover, looking at the Pearson's correlation matrix it can be confirmed that there is no multicollinearity between the independent variables in the regression model. The Pearson's coefficient cannot exceed 0.80, otherwise the regression model will have multicollinearity problems (Bryman and Cramer 1997).

**Table 3: Pearson's Correlations**

		TUR	LEV	SIZE	BDSIZE	BDWOM	BDIND	BDNON_NAT	BDAGE	BDEXT	BDEXEC	AUD	COUNT
<b>TUR</b>	R	1											
	Sig.												
<b>LEV</b>	R	.008	1										
	Sig.	.472											
<b>SIZE</b>	R	.934***	.119	1									
	Sig.	.000	.143										
<b>BDSIZE</b>	R	.656***	.136	.699***	1								
	Sig.	.000	.110	.000									
<b>BDWOM</b>	R	.070	.075	.089	.054	1							
	Sig.	.264	.250	.211	.315								
<b>BDIND</b>	R	.247**	-.149	.249**	.045	.029	1						
	Sig.	.012	.089	.012	.344	.399							
<b>BDNON_NAT</b>	R	0.172*	-.066	.197**	-.024	-.126	.011	1					
	Sig.	.060	.277	.037	.415	.129	.459						
<b>BDAGE</b>	R	.253**	-.036	.251**	.018	-.216**	.194**	.131	1				
	Sig.	.011	.372	.011	.436	.025	.040	.119					
<b>BDEXT</b>	R	-0.167*	.074	-0.173*	-.123	.196**	-.337***	0.148*	-.118	1			
	Sig.	.066	.254	.059	.133	.038	.001	.091	.143				
<b>BDEXEC</b>	R	-.311***	.044	-.327***	-.306***	.021	-.364***	-.068	-.093	.333***	1		
	Sig.	.002	.346	.001	.002	.425	.000	.271	.201	.001			
<b>AUD</b>	R	.306***	-.044	.258***	.107	.027	.255**	.133	.291***	-.236**	-.0177*	1	
	Sig.	.002	.345	.009	.168	.406	.010	.115	.004	.016	.054		
<b>COUNT</b>	R	-.358***	.018	-.324***	-0.156*	-.116	-.326***	.120	-.205**	.458***	.678***	-.350***	1
	Sig.	.000	.437	.001	.079	.148	.001	.139	.031	.000	.000	.001	

\*\*\*. Correlation is significant at the 0.01 level; \*\*. Correlation is significant at the 0.05 level; \*. Correlation is significant at the 0.1 level.



## 5.2 The regression model

A hierarchical ordinary least square regression is conducted to study the impact of independent variables on company performance. As mentioned above several accounting based measures have been considered as dependent variables (ROE, ROA, ROS, Company Turnover and Net Income), but only the model using Company Turnover could be validated. Lopes and Ferraz (2016) also find no empirical evidence that diversity variables affect ROE, ROA and ROS when investigating the impact of intellectual resources and board diversity in Iberian business organizations. The other variables do not seem to be a good fit for the model, as when regressed with boards' diversity measures, the latter fail to explain any variance on performance.

Table 4 below presents the results of the regression model conducted, which it can only be applied to predict company's turnover. By looking at the Adjusted R Square value (Adj.  $R^2 = 0.893$ ), it can be stated that the set of observations used fit very well to the model. R Square is equal to 0.893, meaning that 89.3% of TUR's (Company performance) variability is explained by the model. F-statistic takes a value of 54.139 and is statistically significant at the 0.01 level, which proves that the model as a whole has good predictive capability.

<b>Table 4. Model Summary</b>								
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>Durbin-Watson</b>	<b>Mean dependent variable</b>	<b>F-statistic</b>	<b>Sig.</b>
<b>1</b>	.945 <sup>b</sup>	.893	.877	.6358005	2.134	21.885	54.139	0.000
Predictors: (Constant), COUNT, BDWOM, BDSIZE, BDNON_NAT, BDIND, BDAGE, AUD, BDEXT, BDEXEC, LEV, SIZE								
Dependent Variable: TUR								

A summary of the effect of explanatory variables on company performance (TUR) is presented on Table 5 below. The independent variables (board's characteristics) that statistically influence TUR are: LEV ( $t=-2.669$ ;  $p=0.009$ ), SIZE ( $t=13.726$ ;  $p=0.000$ ), BDSIZE ( $t=8.357$ ;  $p=0.000$ ), BDIND ( $t=1.787$ ;  $p=0.078$ ), BDNON-NAT ( $t=2.666$ ;  $p=0.009$ ) and COUNT ( $t=-2.488$ ;  $p=.015$ ).

No evidence was found to support hypothesis H1, being that the relation between the proportion of women (BDWOM) in boards and company performance (TUR) is not statistically significant ( $t=0.408$ ;  $p=0.684$ ). These results do not agree with the evidence achieved by Erhardt et al., (2003); Francoeur, Labelle and Sinclair-Desgagné, (2008) and Adams and Ferreira, (2009), who pose that higher participation of women in boards boosts firm performance. However, these results are consistent with those of Carter et al., (2003) and Adams, Gupta and Leeth, (2009) that report inconclusive results.

It is observed that BDSIZE positively impacts company performance, hence supporting hypothesis H2, which implies that large board of directors lead to higher levels of company performance. On the same line with these results, Zahra and Pearce, (1989) and Guest, (2009) confirm that that larger boards have greater collective information in their possession, leading to a higher performance. On the other hand, these findings do not corroborate with the study of Jensen (1993), which states that smaller company boards enhance firm performance.

Hypothesis H3 which tests if company performance is affected by the type of audit firm hired is also not supported by the model ( $t=0.712$ ;  $p=0.479$ ). Contrarily to the results achieved by Lee and Lee (2013), which proved that the equity book value and the earnings audited by Big 4 auditors justify more the variations in stock returns than those audited by other auditors, the results on this paper are inconclusive.

**Table 5: The effect of dependent variables on TUR**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	4.961	2.310		2.148	<b>.035**</b>	.358	9.564		
LEV	-1.019	.382	-.107	-2.669	<b>.009***</b>	-1.781	-.258	.936	1.069
SIZE	.858	.062	.906	13.726	<b>.000***</b>	.733	.982	.345	2.903
BDSIZE	.325	.039	.656	8.357	<b>.000***</b>	.247	.402	.871	1.149
BDWOM	.580	1.421	.033	.408	.684	-2.252	3.412	.800	1.251
BDIND	1.431	.801	.150	1.787	<b>.078*</b>	-.165	3.027	.760	1.316
BDNON_NAT	1.763	.661	.211	2.666	<b>.009***</b>	.445	3.081	.855	1.169
BDAGE	.061	.038	.130	1.592	.116	-.015	.137	.808	1.237
BDEXT	.484	1.014	.043	.477	.635	-1.537	2.504	.657	1.522
BDEXEC	2.051	1.230	.188	1.668	.100	-.400	4.503	.422	2.368
AUD	.346	.487	.060	.712	.479	-.623	1.316	.761	1.315
COUNT	-1.204	.441	-.327	-2.733	<b>.008***</b>	-2.082	-.326	.374	2.670

a. Dependent Variable: TUR

\*\*\*. Correlation is significant at the 0.01 level; \*\*. Correlation is significant at the 0.05 level; \*. Correlation is significant at the 0.1 level.

Focusing on the participation of foreigners in boards of directors, it has been found that larger participation of non-nationals leads to better company performance. This confirms hypothesis H4 and in the same time corroborates with the study based in the Korean market by Choi, Park and Yoo (2007), which confirms that diverse nationalities within the board positively affect firm performance. However, these findings are not aligned with the study based on Switzerland, which shows that a large number of diverse nationalities in boards can create conflicts and affect the decision making process, hence negatively affecting firm performance (Ruigrok, Peck and Tacheva 2007).

Regarding outside directors, it has been tested if the expertise they bring to the board positively affects its performance. Hypothesis H5 is not confirmed being that the relationship between outside directors (BDEXT) and TUR is not statistically significant

( $t=0.477$ ;  $p=.635$ ). These results do not confirm the literature of Dahya and McConnell (2005) and Brickley and James (1987) which points out that a relevant number of external directors has the tendency increase company's overall performance. Nevertheless, many other studies also report inconclusive results on the link between company performance and the ratio of external directors (Mehran, 1995; Hermalin and Weisbach, 2003; Bhagat and Black, 2008).

### **5.3 Comparison between Portugal and Spain**

A final analysis is conducted in order to evidence the differences between the two countries, Portugal and Spain. The purpose is to identify whether the distribution of variances and means of the dependent and independent variables are the same for Portuguese and Spanish firms. As shown in Table 6 below, two test have been performed, the Levene's Test for equality of variances and the T-Test for equality of means. In this analysis the null hypothesis states that the variance and the mean of the variables are equally distributed across both countries.

The null hypothesis is rejected only for TUR, SIZE, BDIND, BDAGE, BDEXT, BDEXEC and AUD, meaning that these board characteristics differ across the two countries. The explanation behind these differences could be from different corporate governance frameworks that apply in Portugal and Spain.

<b>Table 6: Comparison between Portugal and Spain</b>							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
<b>TUR</b>	Equal variances assumed	.092	.763	-3.446	81	<b>.001***</b>	-1.316
<b>LEV</b>	Equal variances assumed	.059	.809	.160	81	.874	.007
<b>SIZE</b>	Equal variances assumed	.369	.545	-3.078	81	<b>.003***</b>	-1.258
<b>BDSIZE</b>	Equal variances assumed	.346	.558	-1.426	81	.158	-1.164
<b>BDWOM</b>	Equal variances assumed	.391	.534	-1.050	81	.297	-.025
<b>BDIND</b>	Equal variances assumed	.057	.811	-3.100	81	<b>.003***</b>	-.126
<b>BDNON_NAT</b>	Equal variances assumed	.116	.734	1.092	81	.278	.053
<b>BDAGE</b>	Equal variances assumed	.156	.694	-1.890	81	<b>.062*</b>	-1.611
<b>BDEXT</b>	Equal variances assumed	4.627	.034	4.631	81	<b>.000***</b>	.150
<b>BDEXEC</b>	Equal variances assumed	4.626	.034	8.292	81	<b>.000***</b>	.229
<b>AUD</b>	Equal variances assumed	69.022	.000	-3.364	81	<b>.001***</b>	-.222

\*\*\*. Correlation is significant at the 0.01 level; \*\*. Correlation is significant at the 0.05 level; \*. Correlation is significant at the 0.1 level.

Nevertheless the null hypothesis cannot be rejected for LEV, BDSIZE, BDWOM, and BDNON-NAT, meaning that these board characteristics are similar between the two countries. This could be explained by cultural similarities between the countries, but more importantly the firms comply by the same rules in the financial markets, which is regulated by European laws.

## **6. Conclusions and final remarks**

The efficacy of corporate governance frameworks has received substantial attention by researchers, academics and governmental institutions during the last decades. Companies have to comply with corporate governance frameworks which introduce a set of internal and external mechanisms that can affect companies' overall performance positively or negatively, depending how they are implemented.

This work project analysis the relationship between board characteristics and company performance measured by turnover for non-financial companies listed in the Portuguese and Spanish stock exchange. Turnover is the only measure of performance used in this research, being that other measures such as ROE, ROA, ROS and Net Income showed no significance level in the F-Tests when regressed with the independent variables. The results show that among all the independent variables considered for the model, only the size of the board and the proportion of non-nationals and independent directors sitting on the board of directors affect company performance. Hence, it can be stated that only hypothesis H2 and H4 are confirmed by the statistical model conducted for this study. A second analysis is performed in order to point out the differences in the distribution of some variables when comparing the two Iberian countries. The null hypothesis is rejected for the company size and leverage, proportion of executives and outside directors, board members average age and the type of audit firm hired. Hence, these board attributes differ between Portuguese and Spanish companies.

This work project has some limitations that should be considered in future developments of the topic. Firstly, this research was focused only on listed non-financial companies. Secondly, data used for this analysis is for only one year and two countries. As last, only

one proxy was used to measure company performance. Therefore, it is suggested that future studies extend the timeline, the range of companies and countries by using other performance measures and apply other statistical models in order to thoroughly understand the impact of board characteristics.

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